	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	BRS	L1	17	importin adj alpha	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/30 07:27			0
2	BRS	L2	69	(karyopherin adj alpha) or kap60 or srp1	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/30 07:27			0
3	BRS	L3	7	cbp adj polypeptide	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/30 07:28			0
4	BRS	L4	59	creb adj binding adj protein	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/30 07:28			0
5	BRS	L5	30	cbp same (acetylase or acetyltransferase)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/30 07:28			0
6	BRS	L6	1	(1 or 2) same (3 or 4 or 5)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/10/30 07:29			0

=> d his

(FILE 'HOME' ENTERED AT 07:34:36 ON 30 OCT 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
07:34:58 ON 30 OCT 2002
L1 1580 S (IMPORTIN ALPHA) OR (KARYOPHERIN ALPHA) OR KAP60 OR SRP1
L2 3452 S (CREB BINDING PROTEIN) OR (CBP POLYPEPTIDE)
L3 1368 S CBP (P) (ACETYLASE OR ACETYLTRANSFERASE)
L4 12 S L1 (P) (L2 OR L3)
L5 4 DUPLICATE REMOVE L4 (8 DUPLICATES REMOVED)

=> log y

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FILE 'HOME' ENTERED AT 07:34:36 ON 30 OCT 2002

=> file medline caplus biosis embase scisearch agricola
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'MEDLINE' ENTERED AT 07:34:58 ON 30 OCT 2002

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FILE 'AGRICOLA' ENTERED AT 07:34:58 ON 30 OCT 2002

=> s (importin alpha) or (karyopherin alpha) or kap60 or srp1
L1         1580 (IMPORTIN ALPHA) OR (KARYOPHERIN ALPHA) OR KAP60 OR SRP1

=> s (creb binding protein) or (cbp polypeptide)
L2         3452 (CREB BINDING PROTEIN) OR (CBP POLYPEPTIDE)

=> s cbp (p) (acetylase or acetyltransferase)
L3         1368 CBP (P) (ACETYLASE OR ACETYLTRANSFERASE)

=> s l1 (p) (l2 or l3)
L4           12 L1 (P) (L2 OR L3)

=> duplicate remove l4
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L4
L5             4 DUPLICATE REMOVE L4 (8 DUPLICATES REMOVED)

=> d l5 1-4 ibib abs

L5   ANSWER 1 OF 4     MEDLINE                                  DUPLICATE 1
ACCESSION NUMBER:    2002620053     IN-PROCESS
DOCUMENT NUMBER:     22254878   PubMed ID: 12161448
TITLE:               Acetylation of the adenovirus-transforming protein E1A
                     determines nuclear localization by disrupting association
                     with importin-alpha.
AUTHOR:              Madison Dana L; Yaciuk Peter; Kwok Roland P S; Lundblad
                     James R
CORPORATE SOURCE:    Division of Molecular Medicine, Department of Medicine,
                     Oregon Health and Science University, Portland, Oregon
                     97201, USA.
CONTRACT NUMBER:     DK051732 (NIDDK)
     DK060133 (NIDDK)
SOURCE:              JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Oct 11) 277 (41)
                     38755-63.
                     Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY:        United States
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE:          Entered STN: 20021017
                     Last Updated on STN: 20021017
AB   Posttranslational modifications may alter the biochemical functions of a
     protein by modifying associations with other macromolecules,
     allosterically altering intrinsic catalytic activities, or determining
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subcellular localization. The adenovirus-transforming protein E1A is acetylated by its cellular [redacted]gets, the co-activators ***C[redacted]*** - ***binding*** ***protein*** , p300, and p300/ ***CREB*** - ***binding*** ***protein*** -associated factor in vitro and also in vivo at a single lysine residue (Lys(239)) within a multifunctional carboxyl-terminal domain necessary for both nuclear localization and interaction with the transcriptional co-repressor carboxyl-terminal binding protein (CtBP). In contrast to a previous report, we demonstrate that acetylation of Lys(239) does not disrupt CtBP binding and that 12 S E1A-mediated repression of ***CREB*** - ***binding*** ***protein*** -dependent transcription does not require recruitment of CtBP. Instead we find that the cytoplasmic fraction of E1-transformed 293 cells is enriched for acetylated E1A with relative exclusion from the nuclear compartment. Whereas wild type 12 S E1A binds ***importin*** - ***alpha*** 3, binding affinity was markedly reduced both by single amino acid substitution mutations and acetylation at Lys(239). This is the first demonstration that acetylation may alter nuclear partitioning by direct interference with nuclear import receptor recognition. The finding that the cytoplasmic fraction of E1A is acetylated indicates that E1A may exert its pleiotropic effects on cellular transformation in part by affecting cytoplasmic processes.

L5 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:145120 CAPLUS
DOCUMENT NUMBER: 132:191430
TITLE: Assays, methods and means for modulating nuclear localization
INVENTOR(S): Kouzarides, Tony
PATENT ASSIGNEE(S): Cancer Research Campaign Technology Limited, UK
SOURCE: PCT Int. Appl., 73 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000011478	A1	20000302	WO 1999-GB2731	19990820
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2338837	AA	20000302	CA 1999-2338837	19990820
AU 9954351	A1	20000314	AU 1999-54351	19990820
EP 1105738	A1	20010613	EP 1999-940357	19990820
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 2002523748	T2	20020730	JP 2000-566682	19990820

PRIORITY APPLN. INFO.: GB 1998-18356 A 19980821
WO 1999-GB2731 W 19990820

AB ***CBP*** histone ***acetyltransferase*** acetylates ***Importin*** . ***alpha*** ., affecting ability of ***Importin*** . ***alpha*** . to translocate into the nucleus and import a cargo protein. Assays identify substances which modulate interaction between ***CBP*** and ***Importin*** . ***alpha*** . and acetylation of ***Importin*** . ***alpha*** . by ***CBP*** . Substances identified in the assays are useful for treatment of disorders in which ***Importin*** . ***alpha*** . plays a role.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 4 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2000266303 MEDLINE
DOCUMENT NUMBER: 20266303 PubMed ID: 10805757
TITLE: Regulated nuclear-cytoplasmic localization of interferon regulatory factor 3, a subunit of double-stranded

RNA-activated factor 1.
AUTHOR: Kumar K P; M[redacted]ide K M; Weaver B K; Dingwall [redacted]Reich N C
CORPORATE SOURCE: Department of Pathology, SUNY at Stony Brook, Stony Brook, New York 11794, USA.
CONTRACT NUMBER: PO1CA28146 (NCI)
RO1CA50773 (NCI)
SOURCE: MOLECULAR AND CELLULAR BIOLOGY, (2000 Jun) 20 (11) 4159-68.
Journal code: 8109087. ISSN: 0270-7306.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200007
ENTRY DATE: Entered STN: 20000714
Last Updated on STN: 20000714
Entered Medline: 20000706

AB Viral double-stranded RNA (dsRNA) generated during the course of infection leads to the activation of a latent transcription factor, dsRNA-activated factor 1 (DRAF1). DRAF1 binds to a DNA target containing the type I interferon-stimulated response element and induces transcription of responsive genes. DRAF1 is a multimeric transcription factor containing the interferon regulatory factor 3 (IRF-3) protein and one of the histone acetyl transferases, ***CREB*** ***binding*** ***protein*** (CBP) or p300 (CBP/p300). In uninfected cells, the IRF-3 component of DRAF1 resides in the cytoplasm. The cytoplasmic localization of IRF-3 is dependent on a nuclear export signal, and we demonstrate IRF-3 recognition by the chromosome region maintenance 1 (CRM1) (also known as exportin 1) shuttling receptor. Following infection and specific phosphorylation, IRF-3 accumulates in the nucleus where it associates with CBP and p300. We identify a nuclear localization signal (NLS) in IRF-3 that is critical for nuclear accumulation. Mutation of the NLS abrogates nuclear localization even following infection. The NLS appears to be active constitutively, but it is recognized by only a subset of ***importin*** - ***alpha*** shuttling receptors. Evidence is presented to support a model in which IRF-3 normally shuttles between the nucleus and the cytoplasm but cytoplasmic localization is dominant prior to infection. Following infection, phosphorylated IRF-3 can bind to the CBP/p300 proteins resident in the nucleus. We provide the evidence of a role for CBP/p300 binding in the nuclear sequestration of a transcription factor that normally resides in the cytoplasm.

L5 ANSWER 4 OF 4 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 2000264486 MEDLINE
DOCUMENT NUMBER: 20264486 PubMed ID: 10801418
TITLE: Acetylation of importin-alpha nuclear import factors by CBP/p300.
AUTHOR: Bannister A J; Miska E A; Gorlich D; Kouzarides T
CORPORATE SOURCE: Department of Pathology, Wellcome/CRC Institute, University of Cambridge, Cambridge, CB2 1QR, UK.
SOURCE: CURRENT BIOLOGY, (2000 Apr 20) 10 (8) 467-70.
Journal code: 9107782. ISSN: 0960-9822.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200006
ENTRY DATE: Entered STN: 20000616
Last Updated on STN: 20000616
Entered Medline: 20000602

AB Histone ***acetylases*** were originally identified because of their ability to acetylate histone substrates [1] [2] [3]. ***Acetylases*** can also target other proteins such as transcription factors [4] [5] [6] [7]. We asked whether the ***acetylase*** ***CREB*** - ***binding*** ***protein*** (***CBP***) could acetylate proteins not directly involved in transcription. A large panel of proteins, involved in a variety of cellular processes, were tested as substrates for recombinant ***CBP*** . This screen identified two proteins involved in nuclear import, Rch1 (human ***importin*** - ***alpha***) and importin-alpha7, as targets for ***CBP*** . The acetylation site within Rch1 was mapped to a single residue, Lys22. By comparing the context of Lys22 with the sequences of other known substrates of ***CBP*** and the closely related ***acetylase*** p300, we identified G/SK (in the

single-letter amino acid code) as a consensus acetylation motif. Mutagenesis of the glycine, [redacted] well as the lysine, severely [redacted]aired Rch1 acetylation, supporting the view that GK is part of a recognition motif for acetylation by ***CBP*** /p300. Using an antibody raised against an acetylated Rch1 peptide, we show that Rch1 was acetylated at Lys22 in vivo and that ***CBP*** or p300 could mediate this reaction. Lys22 lies within the binding site for a second nuclear import factor, importin-beta. Acetylation of Lys22 promoted interaction with importin-beta in vitro. Collectively, these results demonstrate that acetylation is not unique to proteins involved in transcription. Acetylation may regulate a variety of biological processes, including nuclear import.

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(FILE 'HOME' ENTERED AT 07:34:36 ON 30 OCT 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 07:34:58 ON 30 OCT 2002

L1 1580 S (IMPORTIN ALPHA) OR (KARYOPHERIN ALPHA) OR KAP60 OR SRP1
L2 3452 S (CREB BINDING PROTEIN) OR (CBP POLYPEPTIDE)
L3 1368 S CBP (P) (ACETYLASE OR ACETYLTRANSFERASE)
L4 12 S L1 (P) (L2 OR L3)
L5 4 DUPLICATE REMOVE L4 (8 DUPLICATES REMOVED)

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	31.83	32.04
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CA SUBSCRIBER PRICE	-0.62	-0.62

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